



Pre-Op

Planning for your
knee replacement surgery



Are You Considering Knee Replacement Surgery?

Knee pain can be the result of injury, biomechanical problems, or disease.

When stiffness and pain in your knee limits your daily activities, knee replacement surgery may be recommended after medication and conservative treatments fail to provide relief. This brochure will help you understand basic knee anatomy, arthritis, and knee replacement surgery.

Knee Anatomy and Function

The knee is a joint that connects the bones in the upper and lower leg, and is comprised of cartilage, muscle, ligaments, and tendons. There are three bones that form the knee joint: the femur (thigh bone), the tibia (shinbone), and the patella (kneecap).

Femur (Thighbone) _____

Patella (Kneecap) _____

Medial Collateral Ligament (MCL) _____

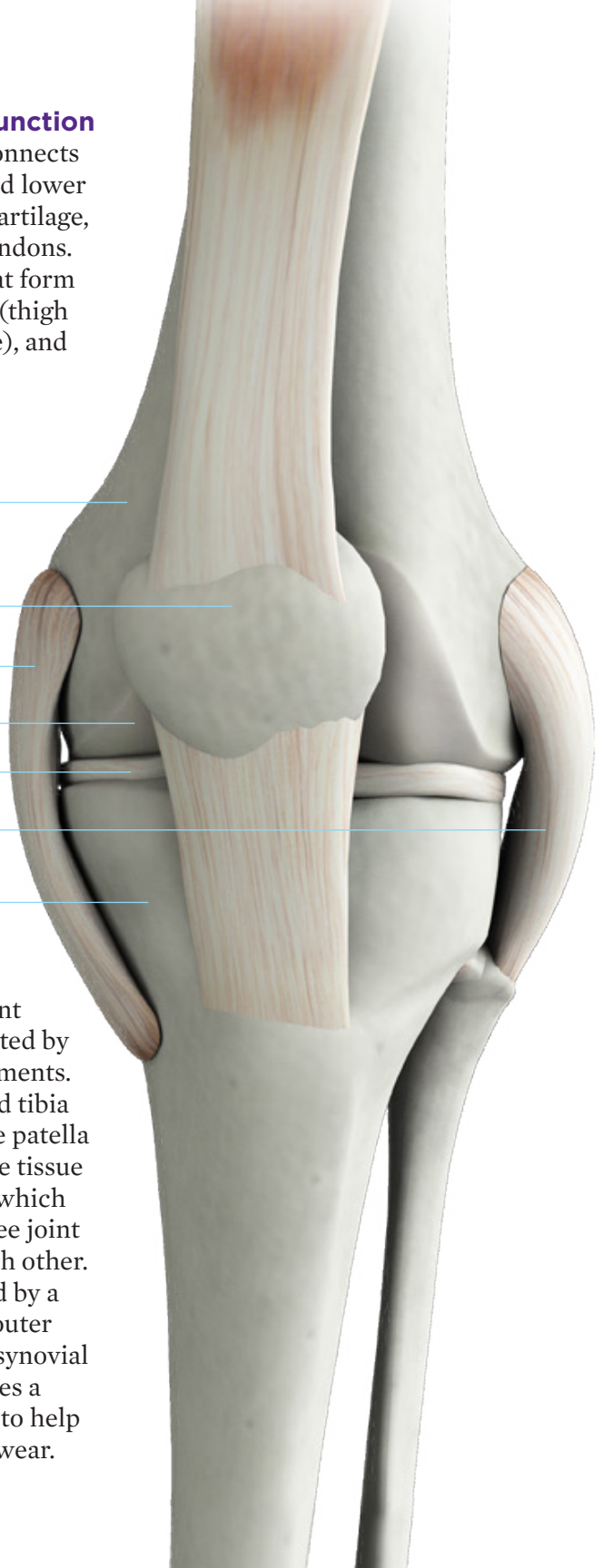
Articular Cartilage _____

Meniscus _____

Lateral Collateral Ligament (LCL) _____

Tibia (Shinbone) _____

The bones of the knee joint are stabilized and connected by fibrous tissues called ligaments. The ends of the femur and tibia along with the back of the patella are covered with a flexible tissue called articular cartilage which helps the bones of the knee joint glide smoothly across each other. The knee joint is enclosed by a capsule that has a tough outer membrane, and an inner synovial membrane which produces a lubricating synovial fluid to help reduce joint friction and wear.



Arthritis and Knee Pain

One of the most common causes of knee pain is arthritis. Arthritis is characterized by the cartilage of the knee joint progressively wearing away. As the cartilage of the knee joint slowly wears away, the bones become exposed and rub against each other resulting in pain, swelling, decreased mobility, and stiffness.

Femur (Thighbone)

Patella (Kneecap)

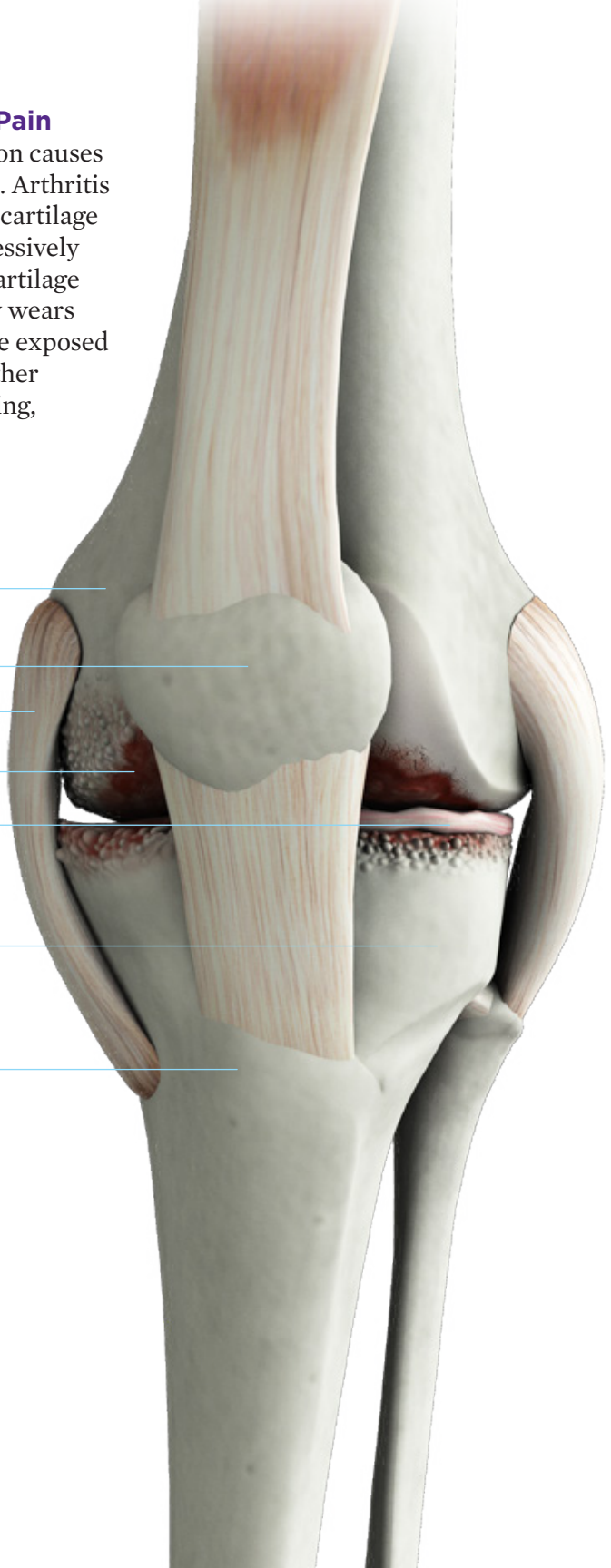
Medial Collateral Ligament (MCL)

Degenerated Articular Cartilage

Meniscus

Lateral Collateral Ligament (LCL)

Tibia (Shinbone)



Total Knee Replacement

Total knee replacement surgery (or arthroplasty) is one of the most common and successful surgical procedures performed. In a total knee replacement surgery the damaged portions of the joint are removed and replaced with prosthetic components. The prosthetic components are typically made of medical-grade metal and plastic. Together, the components mimic the functionality of a healthy knee joint.

The surgical techniques and instruments of knee replacements have been optimized over the years to provide long-lasting results and superior functionality. More than 600,000 knee replacements are performed each year in the United States with over 90% of patients having good results from the surgery.^{1,2}



The complication rate following a total knee replacement is low, with serious complications, such as infection, occurring in fewer than 2% of patients. Some of the complications that may occur following surgery include: infection, blood clots, knee stiffness, and implant complications.²



Preparing for Surgery

To prepare for surgery you may need to:

- Complete tests such as blood and urine samples and an electrocardiogram
- Notify your surgeon about current medications
- Complete major dental procedures or periodontal work prior to surgery
- Prepare for recovery by determining who will assist you post-surgery with daily tasks (family, friends, or social worker) and make modifications to your environment as needed



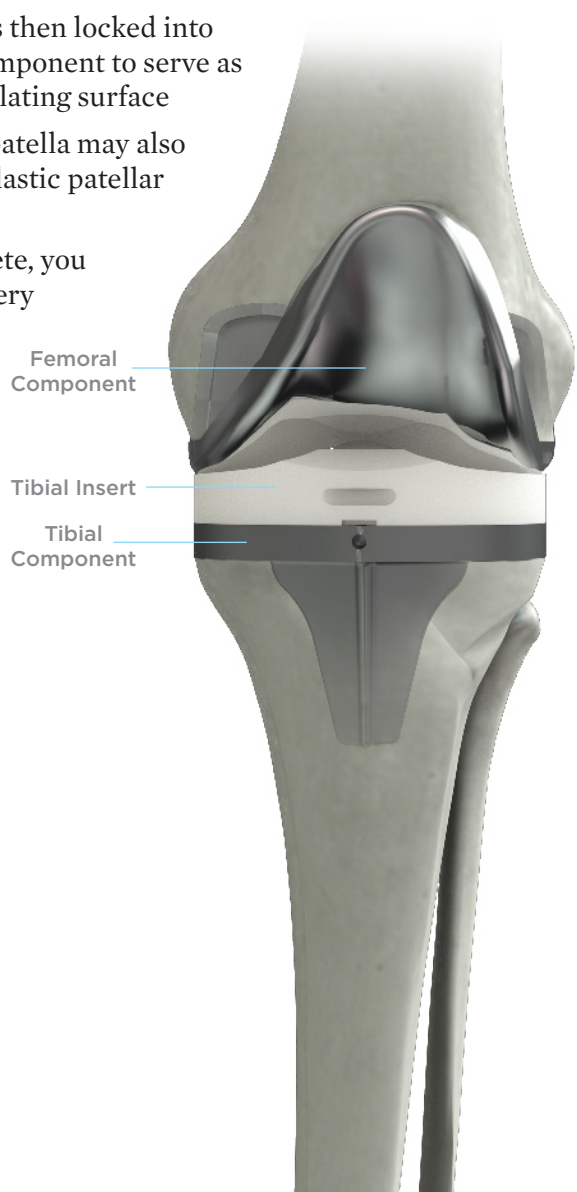
During the Surgery

On the day of your surgery you will be admitted to the hospital and will be evaluated by a member of the anesthesia team. There are different types of anesthesia that may be used during surgery. The anesthesia team will determine which type of anesthesia is best for you.

A total knee replacement surgery typically takes between 1-2 hours. The basic steps involved in this surgery include:

- The affected bone and cartilage at the end of the femur is removed and replaced with a metal femoral component
- Next, the affected bone and cartilage at the top of the tibia is removed and replaced with a metal tibial component
- A plastic tibial insert is then locked into the top of the tibial component to serve as the new smooth articulating surface
- The underside of the patella may also be resurfaced with a plastic patellar component

Once the surgery is complete, you will be moved to the recovery room and will remain there for several hours while your anesthesia is monitored. You can anticipate staying in the hospital for a few days post-surgery to manage pain properly, actively prevent blood clots, and to begin physical therapy.



Potential Benefits of Knee Replacement Surgery

The decision to have total knee replacement surgery should be between the patient and the surgeon. The recommendation to move forward with surgery is based upon your pain and disability along with the influence it has on your quality of life and daily activities. More than 90% of patients who have total knee replacement surgery experience a significant improvement in their ability to perform normal daily activities and experience a dramatic decrease in pain.¹

Potential benefits of knee replacement surgery include:

- Pain relief
- Restoration of leg alignment
- Reduced stiffness
- Improved mobility
- Ability to resume everyday activities such as walking or climbing stairs
- Increased knee stability



About Ortho Development

Ortho Development, the manufacturer of your implant, is passionate about making the best, clinically proven, high-performance orthopedic devices in the world. All of our implants are designed and manufactured with pride in the United States using the most advanced materials and technologies available, and with a strong commitment to quality. For over 20 years, Ortho Development has been dedicated to improving lives and strives to provide the best customer experience in orthopedics. We think that you will notice the Ortho Development difference.

Disclaimer:

The information presented in this brochure is for educational purposes only. The information does not replace the advice or counsel of a doctor or health care professional. Ortho Development assumes no liability related to your decision to pursue joint replacement surgery based upon any information provided here. Ortho Development strives to provide information that is accurate, timely, and complete however Ortho Development does not make any guarantee in this regard. Always consult your doctor or health care professional for medical advice, diagnosis, or decisions. Each patient will experience a different post-operative activity level based upon his or her individual circumstances. Your doctor will counsel you about how to best maintain your activity level to help prolong the lifetime of the device. The lifetime of a joint replacement device is not infinite and varies based upon each individual.

Sources:

1. "Total Knee Replacement." AAOS.org, December 2011. Web. 30 July 2014.
2. Cluett, Jonathan, M.D. "Considering Knee Replacement Surgery? What You Need to Know About Knee Replacement." About.com, 23 June 2014. Web. 30 July 2014.



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